

The PREFACE.

What kind of mechanical way, and physical invention also is there requir'd, that might not this way be found out? The Invention of a way to find the Longitude of places is easily perform'd, and that to as great perfection as is desir'd, or to as great an accurateness as the Latitude of places can be found at Sea; and perhaps yet also to a greater certainty then that has been hitherto found, as I shall very speedily freely manifest to the world. The way of flying in the Air seems principally unpracticable, by reason of the want of strength in humane muscles; if therefore that could be suppli'd, it were, I think, easie to make twenty contrivances to perform the office of Wings: What Attempts also I have made for the supplying that Defect, and my successes therein, which, I think, are wholly new, and not inconsiderable, I shall in another place relate.

'Tis not unlikely also, but that Chymists, if they followed this method, might find out their so much sought for Alkahest. What an universal Menstruum, which dissolves all sorts of Sulphureous Bodies, I have discover'd (which has not been before taken notice of as such) I have shewn in the sixteenth Observation.

What a prodigious variety of Inventions in Anatomy has this latter Age afforded, even in our own Bodies, in the very Heart, by which we live, and the Brain, which is the seat of our knowledge of other things? witness all the excellent Works of Pecquet, Bartholinus, Billius, and many others; and at home, of Doctor Harvy, Doctor Ent, Doctor Willis, Doctor Glisson. In Celestial Observations we have far exceeded all the Antients, even the Chaldeans and Egyptians themselves, whose vast Plains, high Towers, and clear Air, did not give them so great advantages over us, as we have over them by our Glasses. By the help of which, they have been very much outdone by the famous Galileo, Hevelius, Zulichem; and our own Countrymen, Mr. Rook, Doctor Wren, and the great Ornament of our Church and Nation, the Lord Bishop of Exeter. And to say no more in Aerial Discoveries, there has been a wonderful progress made by the Noble Engine of the most Illustrious Mr. Boyle, whom it becomes me to mention with all honour, not only as my particular Patron, but as the Patron of Philosophy it self; which he every day increases by his Labours, and adorns by his Example.

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The good success of all these great Men, and many seemingly great obviousness of most of their and discoveries which from the beginning of the world have been, as yet not minded till these last inquisitive Ages (and may be yet behind multitudes of the like) puts me in such Studies, and the prosecution of them by such methods of our Nation, whose leisure makes them fit to undertake of their fortunes to accomplish, extraordinary things do not only propose this kind of Experimental Philosophy, but a high rapture and delight of the mind, but even as a noble Pleasure. So vast is the variety of Objects in their Inspections, so many different ways there are of great is the satisfaction of finding out new things, the contentment which they will enjoy, not only to themselves but even to that which most men prefer of the very Science.

And if they will please to take any encouragement, and so imperfect endeavours as mine, upon my own assure them, without arrogance, That there has not been any blemish in Mechanicks, that I have hitherto propounded a certain method (which I may on some other opportunity have been able presently to examine the possibility of it; and cogitate divers ways of performing it: And indeed I have much by this method in Mechanicks, as by Algebra and Geometry. Nor can I at all doubt, but that the same is applicable to Physical Enquiries, and as likely to fructify plentiful a crop of Inventions; and indeed there seem to be barren, but may with this good husbandry be highly improved.

Toward the prosecution of this method in Physics, I have here and there gleaned up an handful of Observations, most of which I made use of Microscopes, and some of Instruments that improve the sense; which way I have thought that there are not multitudes of useful and pleasant Observations collected, obvious enough without the helps of Art, but of Mechanical helps for the Senses, both in the surveying